Ken KATUMOTO*: **Notes on fungi from Western Japan (8)**

勝本 謙*: 西日本産菌類論考 (8)

79. Guignardia dioscoreae Sawada, Coll. Agric. Nat. Taiwan Univ. Spec. Publ., **8**: 58, 1959, nom. seminud.

Pseudotheciis gregariis vel sparsis in maculis, solitariis, subepidermatibus, globosis, 100–150 μ diam.; contextu membranaceo, pseudoparenchymatico, atro-brunneo, 2-stratoso, apice ostiolato, ex cellulis polyhedricis, isometricis vel paulum depressis, 6–9 μ diam. composito; ascis basilaribus, bitunicatis, clavatis, apice obtusis et paulum crassiparietalibus, breviter stipitatis, octosporis, 37–46×9–13 μ; paraphysoideis non visis; ascosporidiis distichis, ellipsoideis, oblongis vel ovato-oblongis, continuis, apice utrinque rotundatis, hyalinis, guttatis, 11–15.5×7–9 μ; pycnidiis sparsis, subepidermatibus, globosis, 60–80 μ diam.; contextu pseudoparenchymatico, atro-fuligineo, apice ostiolato, unistratoso, ex cellulis polyhedricis, isometricis, 4–6 μ diam. composito; conidiophoris nullis; conidiosporidiis hystogenicis, obovatis vel pyriformibus, continuis, hyalinis, guttatis, 7–10×5.5–7 μ.

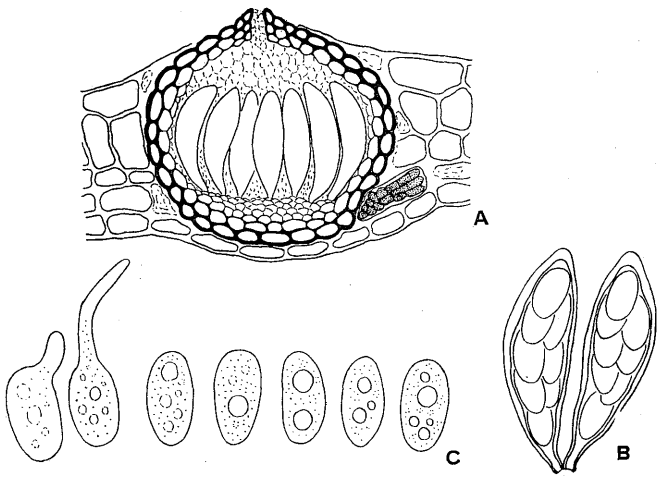

Fig. 1. *Guignardia dioscoreae.* A. Pseudothecium ×300. B. Asci ×700. C. Ascospores ×1000.

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Hab. in foliis vivis *Dioscoreae japonicae* Thunb. Tyôhu, Simonoseki, Prov. Nagato (Sept. 1, 1964. K. Katumoto); in foliis vivis *Dioscoreae gracillimae* Miq. Tyôhu, Simonoseki, Prov. Nagato (Sept. 12, 1964. K. Katumoto).

Distrib. Formosa.

The present fungus is new to the flora of Japan.

The leaf spots are orbicular, elliptic or oblongate, later somewhat irregular, 3-6 mm in diameter, brownish or yellowish brown at first, later greyish white and fragile, and bordered with dark brownish margin. The hyphae creep into the intercellular portion of the mesophyll and fill up the infected cells of the host leaves. The present species has the imperfect stage of Phyllostictina-type which appears on the same leaf spots accompanying with the perfect stage. Many species of the genus *Guignardia* show various forms of the imperfect stage such as *Phyllostictina*, *Kabatia*, *Dothiorella* or *Selenophoma*, and *G. bidwellii* Viala et Rav., the type species of the genus, has also the imperfect stage of Phyllostictina type.

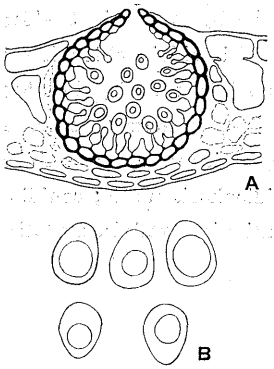


Fig. 2. *Guignardia dioscoreae*.
A. Pycnidium ×300.
B. Pycnospores ×1000.

The fungus was described from Formosa by K. Sawada as a perfect stage of *Colletotrichum dioscoreae* Averna-Sacca, which represents the anthracnose of *Dioscorea alata* L. The very anthracnose disease of *Dioscorea* spp. caused by the same fungus found in Formosa is very common in Japan, and the causal fungus has been treated as *Gloeosporium pestis* Massee. Though the anthracnose fungus was collected at the same time when *Guignardia dioscoreae* was got by the writer, it distinctly showed the different symptom on the leaves and was not found on the leaf spots formed by the latter species. The causal fungus of the anthracnose of *Dioscorea* spp. seems to belong to *Colletotrichum gloeosporioides* Penz., the imperfect stage of *Glomerella cingulata* Spauld. et Schr., in respect of the morphological characters. It may conceivable that the anthracnose fungus is secondarily parasitic or saprophytic on the spots caused by *G. dioscoreae*, and has been errorneously assumed to be the perfect stage of the latter species by Sawada.

80. Guignardia fatsiae Hino et Katumoto, sp. nov.

Pseudotheciis gregariis in maculis, solitariis, subepidermatibus, globosis vel depresso-globosis, 100–120μ diam.; contextu membranaceo, pseudoparenchymatico, atro-brunneo, 2-stratoso, apice ostiolato, ex cellulis polyhedricis, isometricis et 10–15 μ diam. composito; ascis basilaribus, bitunicatis, clavatis, apice rotundatis et crassiparietalibus, breviter stipitatis, octosporis, 45–60×12–16 μ; paraphysoideis moniliformibus, hyalinis, paucis; ascosporidiis distichis, oblongis vel oblongo-fusoideis, continuis, apice utrinque rotundatis, hyalinis, guttatis, 15–19×4.5–5.5 μ.

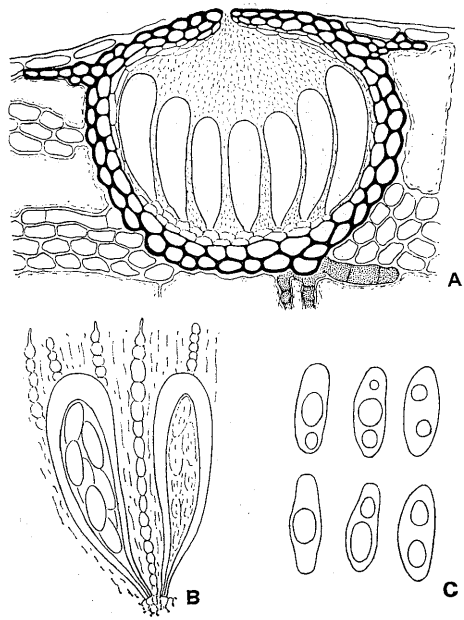


Fig. 3. *Guignardia fatsiae*. A. Pseudothecium ×400. B. Asci ×600. C. Ascospores ×750.

Hab. in foliis vivis *Fatsiae japonicae* Dec. et Planch. Tyôhu, Simonoseki, Prov. Nagato (Oct. 6, 1964. K. Katumoto—Typus in Herb. FAUY).

The leaf spots are large, orbicular to irregular, dark brownish on the upper surface of the leaves and greyish on the under surface. The epistroma slightly spreads into the subepidermal portion close to the pseudothecia. The hyphae creep into the intercellular portion of the mesophyll of the leaves.

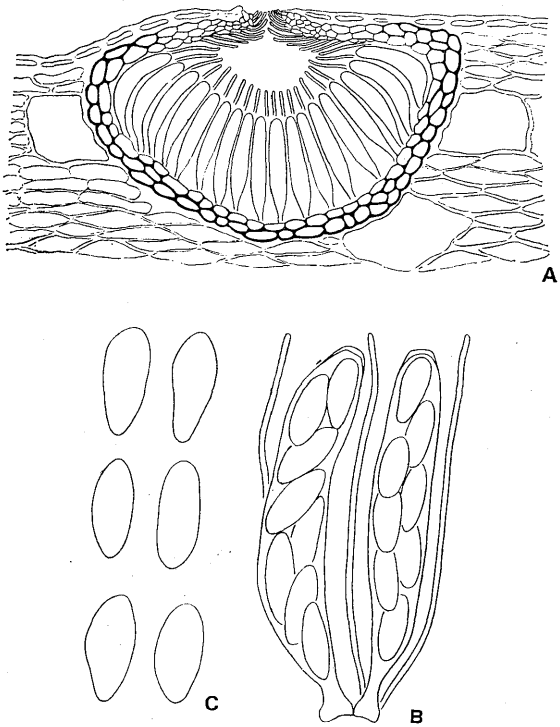
81. Plectosphaera euryae Hino et Katumoto, sp. nov.

Peritheciis hypophyllis, gregariis, solitariis, immersis, depresso-globosis vel leviter obtriangularibus, 150–180 μ diam., 100–130 μ altis; contextu membranaceo, pseudoparenchymatico, atro-brunneo, apice plane ostiolato et pallido, ex cellulis polyhedricis, isometricis, 8–14 μ diam. composito; ascis unitunicatis, cylindraceis vel cylindro-clavatis, apice rotundatis et paulum crassiparietalibus, breviter stipitatis, octosporis, 40.5–56×7–9.5 μ; paraphysibus filiformibus, simplicibus, hyalinis, 1–2 μ crassis; ascosporidiis distichis, oblongis, oblongo-fusoideis vel ellipticis, continuis, apice utrinque rotundatis vel obtusis, laevibus, hyalinis,

9–12.5×4–6 μ.

Hab. in foliis vivis *Euryae japonicae* Thunb. Tyôhu, Simonoseki, Prov. Nagato (Jan. 30, 1963. K. Katumoto—Typus in Herb. FAUY).

The fungus forms no distinct spot, and appears as a small blackish dots on the under surface of the leaves with the ostiolate apical portion of the perithecia.



F:g. 4. *Plectosphaera euryae.* A. Perithecium ×300. B. Asci ×1000. C. Ascospores ×1000.

82. Plectosphaera yakusimensis Hino et Katumoto, sp. nov.

Peritheciis sparsis vel aggregatis in maculis, solitariis, subepidermatibus, leviter plane globosis, 230–350 μ diam., 160–240 μ altis; contextu membranaceo, pseudoparenchymatico, brunneo, apice ostiolato, ex cellulis polyhedricis, plane lenticularibus, 5–7×2–3 μ composito; ascis basilaribus, unitunicatis, cylindraceis vel cylindro-clavatis, apice rotundatis et paulum crassiparietalibus, brevissime stipitatis vel subsessilibus, octosporis, 62–78×12.5–16.0 μ; paraphysibus fili-

formibus, simplicibus, hyalinis, 1–1.5 μ crassis; ascosporidiis distichis, oblongis vel oblongo-fusoideis, apice utrinque obtusis, hyalinis, laevibus, 15–19×4.5–6 μ.

Hab. in foliis vivis *Rhododendri metternichii* Sieb. et Zucc. var. *yakusimani* (Nakai) Ohwi. Mons Miyanouradake, Ins. Yakusima, Prov. Oosumi (Aug. 4, 1955. K. Katumoto—Typus in Herb. FAUY).

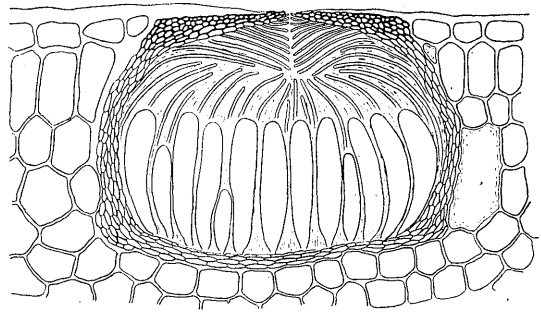


Fig. 5. *Plectosphaera yakusimensis.* Perithecium ×170.

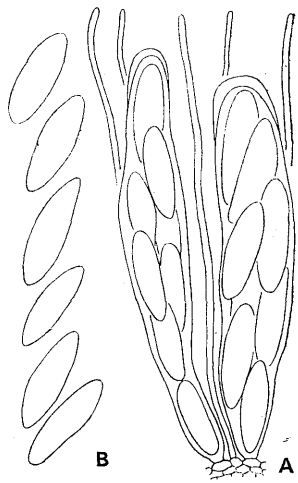


Fig. 6. *Plectosphaera yakusimensis.* A. Asci ×750. B. Ascospores ×900.

The leaf spots are orbicular, brownish to yellowish brown, bordered with brownish margin, and 2.5–5 mm in diameter.

83. Aechidium epimedii P. Henn. et Shirai apud P. Henn., Engl. Bot. Jahrb., **28**: 264, 1901.

Hab. on the leaves of *Epimedium sempervirens* Nakai. Mt. Tokusagamine, Atô-tyô, Prov. Nagato (Aug. 26, 1956. K. Katumoto).

Epimedium sempervirens is a new host plant of this rust fungus.

84. Aecidium phyllanthi P. Henn., Engl. Bot. Jahrb., **15**: 6, 1892.

Hab. on the leaves of *Phyllanthus flexuosus* Müll.-Arg. Zyakuti-kyô, Nisiki-tyô, Prov. Suô (Aug. 10, 1962. I. Hino & K. Katumoto).

New to the flora of Honsyû.

85. Puccinia argentata (C. F. Schultz) Winter, Hedw., **19**: 38, 1880.

Aecidium argentata C. F. Schultz, Prodr. Fl. Starg.: 454, 1806.

Puccinia noli-tangeris Corda, Icon. Fung., **4**: 16, 1840—S. Ito, Myc. Fl. Jap., **2**(3): 263, 1950.

Hab. on the leaves of *Impatiens hypophylla* Makino. Mt. Kosôbo, Prob.

Hyûga (July 26, 1955. K. Katumoto).

Impatiens hypophylla is a new host plant of this rust fungus.

86. Puccinia breviculmis Dietel, Ann. Mycol., **5**: 72, 1907.

Hab. on the leaves of *Carex leucochloa* Bunge var. *fibrillosa* T. Koyama. Isl. Misima, Hagi, Prov. Nagato (May 13 & 15, 1962. K. Katumoto).

Carex leucochloa var. *fibrillosa* is a new host plant of this rust fungus.

87. Puccinia cacao McAlp., Rusts Austral.: 117, 1906.

Hab. on the leaves and culms of *Hemarthria compressa* R. Br. Ube, Prov. Nagato (Oct. 6, 1962 & Aug. 21, 1964. I. Hino).

Hemarthria compressa is a new host plant of this fungus in Honsyû.

88. Puccinia convolvuli Cast., Obs. Fl. Ured., **1**: 16, 1842.

Hab. on the leaves of *Calystegia hederacea* Wallich. Ube, Prov. Nagato (Aug. 24, 1958. I. Hino).

Calystegia hederacea is a new host plant of this rust fungus.

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79. **Guignardia dioscoreae** Sawada (日本新産) ヤマノイモおよびタチドコロの葉に類円形，褐色乃至黄褐色の病斑を形成し，子嚢殻および柄子殻を群生する。本種は初め台湾においてダイジョウの炭疽病菌の完全時代として発表されたが，これは明らかに誤まりであって，炭疽病菌とは全く異なった種類である。

80. **Guignardia fatsiae** Hino et Katumoto (新種) ヤツデの葉縁に大形，褐色の病斑を形成し，その裏面は灰白色を呈する。子嚢殻は葉表に群生し，頂部に僅かに子座が拡がっている。

81. **Plectosphaera euryae** Hino et Katumoto (新種) ヒサカキ生葉の裏面に群生する微細な黒点として現われ，病斑を形成しないのでほとんど目立たない。子嚢殻はやや扁平な半球形で，頂部殻壁が表皮下に平たく拡がる。

82. **Plectosphaera yakusimensis** Hino et Katumoto (新種) ヤクシマシャクナゲの葉に円形黄褐色の顕著な病斑を形成し，子嚢殻を散生する。屋久島宮之浦岳の頂上近い高地で採集した。

83. **Aecidium epimedii** P. Henn. et Shirai トキワイカリソウに寄生 (新寄主)。

84. **Aecidium phyllanthi** P. Henn. コバンノキに寄生 (本州新産)。

85. **Puccinia argentata** (C.F. Schultz) Wint. ハガクレツリフネに寄生 (新寄主)。

86. **Puccinia breviculmis** Diet. ハマアオスゲに寄生 (新寄主)。

87. **Puccinia cacao** McAlp. コバノウシノシッペイに寄生 (本州における新寄主)。

88. **Puccinia convolvuli** Cast. コヒルガオに寄生 (新寄主)。